

## DEFENCE DEVELOPMENT SECTION, CHRISTCHURCH

The change-over of the Defence Development Section to the Canterbury College Industrial Development Department is proceeding and an Advisory Committee has been elected.

The assembly and testing of three aerial structures for meteorological radar sets has been completed.

A further batch of seven meters for measuring moisture in wheat grains has been completed to order.

At the request of the Wheat Research Institute a machine has been developed to count wheat grains. Considerable experimental work was necessary to obtain a satisfactory method of separating the grains sufficiently. The counting is then done by photo-tube and relay. The accuracy obtained is about 0.2 per cent. with a speed of 200 grains per minute.

A small belt-type dough-moulding machine was designed and produced for the Wheat Research Institute. Development is now proceeding for a bun-moulding machine.

For the various departments of Canterbury University College a large amount of work has been done on the construction and repair of scientific laboratory equipment.

## DOMINION OBSERVATORY

*Control of Clocks.*—A new method of automatically recording wireless time signals resulted in the maintenance of a higher standard of accuracy in time control.

*Time Service.*—The usual time service was maintained. The number of telephone calls for correct time was just over two thousand, exceeding that of the previous year. The increase was probably due to the frequent stopping of electric clocks by power cuts. The Government Buildings' clock was checked daily and regulated when necessary.

*Seismic Activity.*—In all, 233 earthquake shocks were reported felt during the year, which was a comparatively active period.

Numerous shocks originated off the north-east coast of the North Island, a strong one on the 26th March, 1947, being followed by seismic waves which caused damage on parts of the Gisborne coast. A later shock in the same area produced sea-waves of smaller intensity.

The strongest shock of the year occurred in the Jackson's Bay region on the 13th October. It reached intensity M—MVII+ in the epicentral region and was widely felt in the South Island.

*Gravity Survey.*—The Observatory co-operated in a gravity survey of New Zealand carried out during the year.

## DOMINION LABORATORY

The amount of chemical work for Government Departments that the Laboratory is called upon to do continues to increase, and advisory and research work for industry is also increasing rapidly.

The total number of samples dealt with for the year was 26,816, as compared with 25,103 in the previous year. Of these, 19,046 were forwarded by the Health Department and 2,376 from various branches of the Department.

The work of the Laboratory is briefly summarized below :—

## ROCKS, MINERALS, AND CLAYS

A thorough examination was made of cementmaking raw materials collected by the Geological Survey from Southland. Regular tests of New-Zealand-made cements for compliance with British Standard specifications were carried out.